

(54) ZINC ELECTRODE FOR ALKALINE ZINC STORAGE BATTERY**(11) 59-66061 (A)****(43) 14.4.1984 (19) JP****(21) Appl. No. 57-177162****(22) 7.10.1982****(71) SANYO DENKI K.K. (72) SANEHIRO FURUKAWA(1)****(51) Int. CP. H01M4/42, H01M4/62**

PURPOSE: To increase the cycle life of a zinc electrode for an alkaline zinc storage battery by forming the electrode by the use of zinc oxide powder and zinc metal powder which have specified grain diameters and are used as principle components as well as the silicate of an alkaline earth metal.

CONSTITUTION: After 73wt% zinc oxide powder of 0.1~0.5 grain diameter, 10wt% zinc metal powder of 1~6 μ grain diameter, 2wt% mercury oxide and 10wt% calcium silicate are mixed, 5wt% polytetrafluoroethylene dispersion and 50wt% water are kneaded into the mixture, then the kneaded mixture is formed into a sheet-like shape. Next, the thus formed sheet-like member is brought into contact with a current collector before being rolled, thereby making a zinc electrode 1. After that, a nickel-zinc storage battery is constituted by combining the zinc electrode 1 with a nickel electrode 2 and alkaline electrolyte. As a result, increase in the diameter of crystals is retarded by enabling homogeneous mixing by the restriction of the grain diameters. Besides, generation of areas in which the electrolyte is deficient is reduced owing to the silicate contained in the zinc electrode 1, thereby the cycle life of the zinc electrode 1 can be improved.

